

5.100 REGULATIONS PERTAINING TO CONSTRUCTION AND OPERATION OF NET METERING SYSTEMS FOR THE PURCHASE AND SALE OF ELECTRICITY FROM SMALL ELECTRICAL GENERATING SYSTEMS TO AND FROM ELECTRIC COMPANIES.

5.101 Purpose and Scope

This rule establishes the standards and procedures governing application for, and issuance or revocation of, a certificate of public good for net metering systems under the provisions of 30 V.S.A §§ 219a, 219b and 248. This rule also incorporates the technical specifications related to interconnection requirements and safety standards for net metering systems.

This rule is applicable to all net metered installations in Vermont, and applies to every person, firm, company, corporation and municipality engaged in the construction or operation of any net metering system which is or shall become subject to the jurisdiction of this Board.

5.102 Definitions

For the purposes of this rule, the following definitions apply:

- (A) "Board" means the Public Service Board of the State of Vermont.
- (B) "Conditional waiver of a criterion of 30 V.S.A. § 248" means that the requirements for the presentation of evidence under the criterion, a specific review of the project by the Board under the criterion, and the development of specific findings of facts for the criterion by the Board will be waived, unless any party, or the Board on its own motion, raises, and the Board finds that the application raises, a significant issue under the criterion.
- (C) "Customer" means a retail electric consumer who uses a net metering system.
- (D) "Department" means the Department of Public Service of the State of Vermont.
- (E) "Group" net metering means a group of customers, or a single customer with multiple electric meters, located within the same electric company service territory, where the customers have elected to combine meters as a single billing entity in order to offset that billing against a net metered system.

- (F) "kWh" means kilowatt hours
- (G) "Net metering," means measuring the difference between the electricity supplied to a customer and the electricity fed back by a net metering system during the customer's billing period using a single, non-demand meter, or such other meter that would otherwise be applicable to the customer's usage but for the use of net metering. In the case of group systems using multiple meters, the calculation will be made by converting all meters to a non-demand, non-time-of-day meter, and equalizing them to the company's tariffed kilowatt-hour rate defined as the kWh rate component of the interconnecting company's general service rate class that consists of two rate components: a service charge and a kWh rate.
- (H) "Net metering system," means a facility for generation of electricity that is no more than 250 kW (AC) capacity; operates in parallel with facilities of the electric distribution system; is intended primarily to offset part or all of the customer's or group's own electricity requirements; is located on the customer's or a member of the group's premises; and employs a renewable energy source produced using a technology that relies on a resource that is being consumed at a harvest rate at or below its natural regeneration rate pursuant to 30 V.S.A. § 8002(2); or is a combined heat and power system with a capacity up to 20 kW that meets the definition of a combined heat and power facility under 10 V.S.A. § 6523(b)(2).
- (I) "Net Metering Technical Specifications" mean the technical and safety requirements for interconnection of net metering systems with electric companies' distribution systems as attached in Appendix A (Tables 1 through 5). From time to time, the Board may, after opportunity for comment, by rule amendment or order, modify or revise the specifications.
- (J) "Peak Demand" means the highest monthly peak reported in either the electric company's FERC form 1, page 401b, column (d); or the electric company's Electric Annual Report to the Vermont Department of Public Service for the Year

End, page E-8, column (b).

- (K) "Public Service Board Net Metering Application Form" means the current Board application form for net metering systems. From time to time the Board may modify or revise such application form.

5.103 Rates, Fees and Payments

Net metered customers shall pay the same rates, fees or other payments and be subject to the same conditions and requirements as all other purchasers from the electric company in the same rate class, except for appropriate and necessary conditions approved by the Board for the safety and reliability of the electric distribution system.

5.104 Energy Measurement for Net Metering Systems

- (A) Electric energy measurement for net metering systems shall be calculated in the following manner:
1. The electric company which serves the customer or group shall measure the net electricity produced or consumed during a billing period, in accordance with normal metering practices.
 2. If, at the end of a billing period, the electricity supplied by the electric company exceeds the electricity generated and fed back to the electric distribution system during the billing period, then the customer or group shall be billed for the net electricity supplied by the electric company, net of any kWh credit accumulated in the preceding 12 months, in accordance with normal metering practices.
 3. If, at the end of a billing period, the electricity generated by the customer or group exceeds the electricity supplied by the electric company:
 - a. The customer or group shall be billed for the appropriate charges for that billing period, in accordance with Section 5.103; and
 - b. The customer or group shall be credited for the excess kilowatt-hours generated during the billing period, with this kilowatt-hour

credit appearing on the bill for the following billing period. The credits do not result in financial payments to the customer.

4. Any accumulated kilowatt-hour credits shall be used within 12 months from the month earned or shall revert to the electric company without any compensation to the net metering system customer.
5. Any net excess generation reverting to the company shall be considered SPEED resources pursuant to 30 V.S.A. § 8005 and Rule 4.300.
6. For net metering systems using time-of-day, demand or other types of metering, the manner of measurement and the application of bill credits for the electric energy produced or consumed shall be substantially similar to that specified for use with a single non-demand meter.

5.105 Group System Requirements

- (A) Group systems may credit all on-site generation from the associated net metering system against all meters designated to the group system.
- (B) In addition to any other requirements of 30 V.S.A. §§ 219a and 248 and Board rules, before a group system may be formed and served by an electric company, the group shall file with the Board and all other parties required by the application form, the following information:
 1. The meters to be included in the group system, which shall be located within the same electric company service territory;
 2. A method for adding and removing meters included in the group system;
 3. A designated person responsible for all communications from the group system to the serving electric company, for receiving and paying an aggregate bill for any service provided by the serving company for the group system, and for receiving any other communications regarding the group system; and
 4. A binding process for the resolution of any disputes within the group system relating to net metering that does not rely on the serving electric

company, the Board or the Department.

- (C) Group system customers shall, at all times, maintain a written designation to the serving electric company of a person who shall be the sole person authorized to receive and pay bills for service provided by the electric company, and for any other communications regarding the group system. However, such designation shall not relieve the company of the obligations to all group system members pursuant to subsections 5.105(E) and 5.112(D)
- (D) The electric company shall implement appropriate changes to a group system within thirty days after receiving written notification from the person designated under subsection 5.105(B). However, written notification of a change in the person designated under subsection 5.105(B) shall be effective upon receipt by the company. The company shall not be liable for action based on such notification, but shall make any necessary corrections and bill adjustments to implement revised notifications.
- (E) In cases of non-payment of group system bills, the electric company may disconnect all meters associated with the group system in accordance with Board Rules 3.300 and 3.400, provided that prior to disconnection, the company shall send a copy of the disconnection notice required by those rules to all group system members.
- (F) The company shall be responsible for issuing a single aggregate monthly bill to the person designated under subsection 5.105(B) that itemizes the monthly total consumption from each meter included in the group system, including the meter physically attached to the net metered generator. Allocation of any credits for excess generation among group system members shall be the responsibility of the group system members.
- (G) If it determines that it would promote the general good, the Board shall permit a noncontiguous group of net metering customers to comprise a group net metering

system. In making its determination, the Board shall give due consideration to any comments filed regarding the net metering application.

5.106 Electric Company Requirements

(A) Pursuant to 30 V.S.A. § 219a(h), electric companies:

1. Shall make net metering available to any customer using a net metering system on a first-come, first-served basis until the cumulative output capacity of net metering systems equals 2.0 percent of the distribution company's peak demand during 1996 or the peak demand during the most recent full calendar year, whichever is greater. However, an electric company and a net metering system customer may jointly petition the Board to exceed this capacity;
2. Shall allow net metering systems to be interconnected using a kWh meter capable of registering the flow of electricity in two directions or such other comparably equipped meter that would otherwise be applicable to the customer's usage but for the use of net metering;
3. May, at their own expense, and with the written consent of the customer, install one or more additional meters to monitor the flow of electricity in each direction;
4. Shall charge the customer a minimum monthly fee that is the same as other customers of the electric distribution company in the same rate class, but shall not charge the customer any additional standby, capacity, interconnection, or other fee or charge related to net metering;
5. May charge reasonable fees for interconnection, establishment, special meter reading, accounting, account correcting and account maintenance of group systems and systems greater than 15 kW in capacity in accordance with section 5.111;
6. May charge a reasonable fee to cover the cost of electric company improvements necessary to distribute power if the capacity of the distribution

system is determined by the Board to be insufficient for the designed generation;

7. May require that all meters included within a group system be read on the same billing cycle;

8. May book and defer, with carrying costs, additional incremental costs, to the extent that such costs are not already recovered directly related to implementing group systems and systems greater than 15 kW in capacity.

(B) All such requirements shall be pursuant to and governed by a tariff approved by the Board and any applicable Board rule or order, which tariffs shall be designed in a manner likely to facilitate net metering.

(C) Notwithstanding the provisions of section 5.104, an electric company may contract to purchase all or a portion of the output products from a net metering system, provided:

1. The system obtains a certificate of public good pursuant to section 5.109.

2. Any contracted power shall be subject to the limitations set forth in subsection 5.106 (A)1.

3. Any contract shall be subject to interconnection and metering requirements in subsection 5.106 (A) and section 5.111.

4. Any contract may permit all or a portion of the tradeable renewable energy credits for which the system is eligible to be transferred to the electric company.

5.107 Conditional Waiver of 30 V.S.A § 248(b) Criteria

Pursuant to 30 V.S.A. § 219a(a), which provides that the Board may waive the requirements of 30 V.S.A. § 248(b) that are not applicable to net metering systems, the Board conditionally waives the following criteria:

(A) For net metering systems which are installed on or in an existing structure or new home or business, all criteria under 30 V.S.A. § 248(b), with the exception of 30 V.S.A. § 248(b)(3) (stability and reliability).

(B) For wind turbines and other systems which are installed on, as, or within a new

structure which is not a home or business:

1. All criteria under 30 V.S.A. § 248(b), with the exception of 30 V.S.A. §§ 248(b)(1)(orderly development), (3)(stability and reliability), (5)(environmental considerations), and (8)(outstanding resource waters).
2. With respect to 30 V.S.A. § 248(b)(5), all criteria and subcriteria, except for compliance with 10 V.S.A. §§ 6086(a)1(B)(waste disposal), 1(D)(floodways), 1(E)(streams), 1(F)(shorelines), 1(G)(wetlands), 4(soil erosion), 8(aesthetics, historic sites, natural areas), and 8(A)(necessary wildlife habitat).

5.108 Aesthetic Evaluation of Net Metered Projects

(A) The Board has adopted the Vermont Environmental Board's Quechee analysis for guidance in assessing the aesthetic impacts of net metered projects, including wind turbines. In determining whether a project raises a significant issue with respect to aesthetic criteria contained in 30 V.S.A. 248(b)(5), the Board is guided by the two-part test outlined below:

1. First a determination must be made as to whether a project will have an adverse impact on aesthetics and the scenic and natural beauty. In order to find that it will have an adverse impact, a project must be out of character with its surroundings. Specific factors used in making this evaluation include the nature of the project's surroundings, the compatibility of the project's design with those surroundings, the suitability of the project's colors and materials with the immediate environment, the visibility of the project, and the impact of the project on open space.
2. The next step in the two-part test, once a conclusion as to the adverse effect of the project has been reached, is to determine whether the adverse effect of the project is "undue." The adverse effect is considered undue when a positive finding is reached regarding any one of the following factors:
 - a. Does the project violate a clear, written community standard intended

to preserve the aesthetics or scenic beauty of the area?

b. Have the applicants failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings?

c. Does the project offend the sensibilities of the average person? Is it offensive or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area?

3. Analysis of whether a particular project will have an "undue" adverse effect on aesthetics and scenic or natural beauty is also significantly informed by the overall societal benefits of the project.

(B) With respect to the Board's review of an application for a single wind turbine under 150 feet in height, there shall be a rebuttable presumption that the wind turbine does not have an undue adverse aesthetic impact.

5.109 Certificates of Public Good

(A) Petitions for systems of 150 kW or less in capacity

1. Form and Content. A petition for a certificate of public good for a net metering system of 150 kW or less in capacity shall be filed with the Board by using the Public Service Board Net Metering Application Form and shall contain all of the information required by the instructions to that form.

2. Service of Petitions. The applicant shall provide copies of the completed Public Service Board Net Metering Application Form to the persons and organizations as indicated in the application form's instructions.

3. Hearings. In cases where the Board determines that a system raises a significant issue with respect to one or more of the substantive criteria applicable to the system, the Board may determine to hear evidence on the issue. In any decision resulting from such a hearing, the Board need only issue findings and conclusions on the criteria concerning which it determined to hold a hearing.

4. Approval. In cases where there are no objections or requests for hearing and the Board determines that the petition does not raise a significant issue, the Board will issue a certificate of public good following the review period as specified in the application form.

(B) Petitions for systems of greater than 150 kW in capacity

Petitions for systems greater than 150 kW in capacity shall be filed in accordance with the requirements of 30 V.S.A. § 248. The petition need address only those criteria applicable to the system under section 5.107. In cases where the system does not raise significant issues with respect to the applicable criteria, the petition may be filed under 30 V.S.A. § 248(j).

(C) Termination

1. Transfer of Certificates. A certificate of public good for a net metering system is automatically transferred when the property with a net metering system is sold or otherwise conveyed. The new owner may commence net metering provided that the new owner: (1) agrees to operate and maintain the net metering system according to the terms and conditions of the certificate of public good and in compliance with this Rule 5.100 and; (2) files the Board-approved transfer form with the Board and the electric company. The Board will provide a simplified transfer form for this purpose.

2. Revocation. The Board may, after notice and opportunity for hearing, revoke any certificate of public good for a net metering system for the following causes:

- a. the certificate was based on false or misleading information supplied by the applicant;
- b. the system was not installed, or is not being operated, in accordance with the National Electric Code or applicable interconnection standards;
- c. the holder of the certificate has failed to comply with the

conditions of approval, representations made in the application,
or this rule; or

d. other good cause exists for revocation.

5.110 Liability Insurance

Residential net metering customers shall maintain a liability insurance policy in an amount of no less than \$100,000. Non-residential net metering customers shall maintain a liability insurance policy in an amount of no less than \$300,000.

5.111 Interconnection Requirements

Net metering facilities of 150 kW or less in capacity shall be installed and operated in accordance with Appendix A, the Net Metering Technical Specifications (Tables 1 through 5). Net metering systems greater than 150 kW in capacity, shall follow the interconnection procedures contained in Board Rule 5.500.

5.112 Disconnection of a Net Metered System

- (A) The following procedures shall govern disconnection of a net metered system from the electrical system. These procedures apply to net metering customers only and do not supplant Board Rules 3.300 and 3.400 relating to company disconnection in general.
- (B) Customers that initiate a permanent disconnection of their net metering systems must notify their respective electric company, and the electric company must notify the Board and the Vermont Department of Public Service of the disconnection.
- (C) In the event an electric company needs to perform an emergency disconnection of a net metering system, when continued interconnection of the system is likely to result in significant disruption of service or is likely to endanger life or property, the electric company must notify the customer within 24 hours after the disconnection. For the purpose of this section, the term emergency shall mean a situation in which continued interconnection of the net

metering system is imminently likely to result in significant disruption of service or endanger life or property.

1. If the emergency is not caused by the net metering system, the company shall reconnect the net metering system upon cessation of the emergency.

2. If the emergency is caused by the net metering system, the company must communicate the nature of the problem to the customer within 5 days, and attempt to resolve the problem. If the problem has not been resolved within 30 days of an emergency disconnection, the electric company shall file a disconnection petition with the Board.

- (D) Non-emergency disconnections shall follow the same procedure as emergency disconnections outlined above, except that the electric company will give written notice of the disconnection no earlier than 10 days and no later than 3 working days prior to the first date on which disconnection of the net metering system may occur. Such notice shall communicate the reason for disconnection to the customer and the expected duration of the disconnection. An electric company may obtain, at the discretion of the customer, a net metering customer's written agreement to notice requirements for non-emergency disconnections which are different from those set forth in this Rule, provided that the electric company first advises the customer of his or her rights under this rule and informs the customer that he or she may contact the Consumer Affairs and Public Information Division of the Vermont Department of Public Service. For group systems, such agreement may be obtained from the person designated under section 5.105(B).
- (E) Customers who are involuntarily disconnected may file a complaint with the Board at any time following disconnection. Within 30 days of the date the complaint is filed, the Board may hold a hearing to investigate the complaint. In the event of the filing of such a complaint, the electric company shall carry the burden of proof to demonstrate the reasonableness of disconnection.

5.113 Electric Company Tracking of Net Metered Systems

All electric companies with net metered customers shall maintain current records of the cumulative amount of net metered generation within their respective service territories, pursuant to 30 V.S.A. § 219a. Electric companies shall also keep current records regarding the number and size of net metered systems and disconnections of net metered systems in their service areas.